

## **SQL queries:**

**Extract the city list information:**

```
SELECT * FROM city_list
```

**Extract the city data information:**

```
SELECT * FROM city_data
```

**Extract the global data information:**

```
SELECT * FROM global_data
```

**Extract my city information from city\_data table:**

```
SELECT * FROM city_data
```

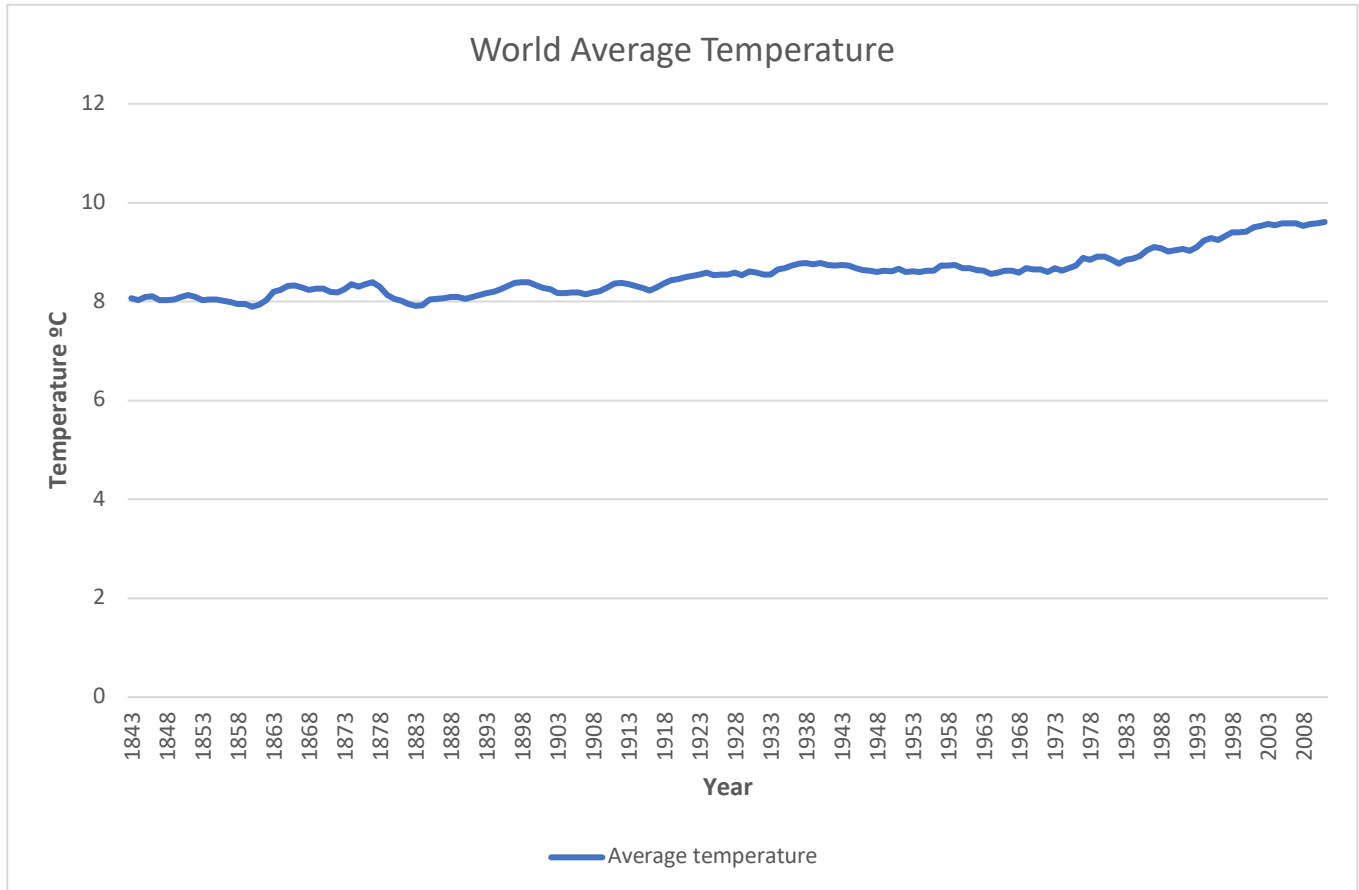
```
WHERE country = 'Saudi Arabia'
```

```
AND city = 'Riyadh'
```

## Data visualization:

I used Excel to display the average and make the charts

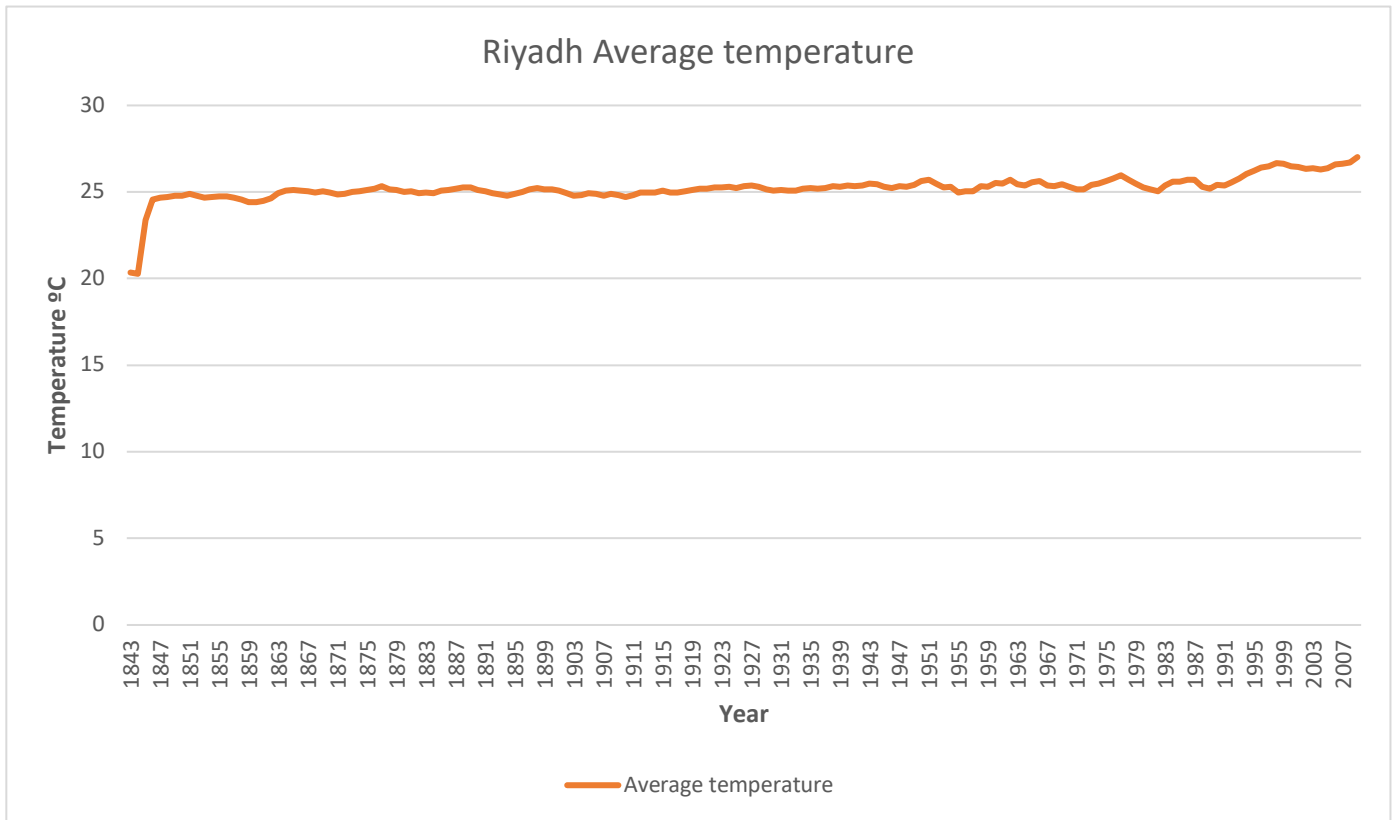
**world averages** (for the years between 1843 – 2013 since the data for my city available for this range only):



Using the Average function to calculate the moving average:

1841	7.69	7.602
1842	8.02	7.73
1843	8.17	7.862
1844	7.65	7.866
1845	7.85	7.876
1846	8.55	8.048
1847	8.09	=AVERAGE(B95:B99)
1848	7.98	8.024
1849	7.98	8.09
1850	7.9	8.1

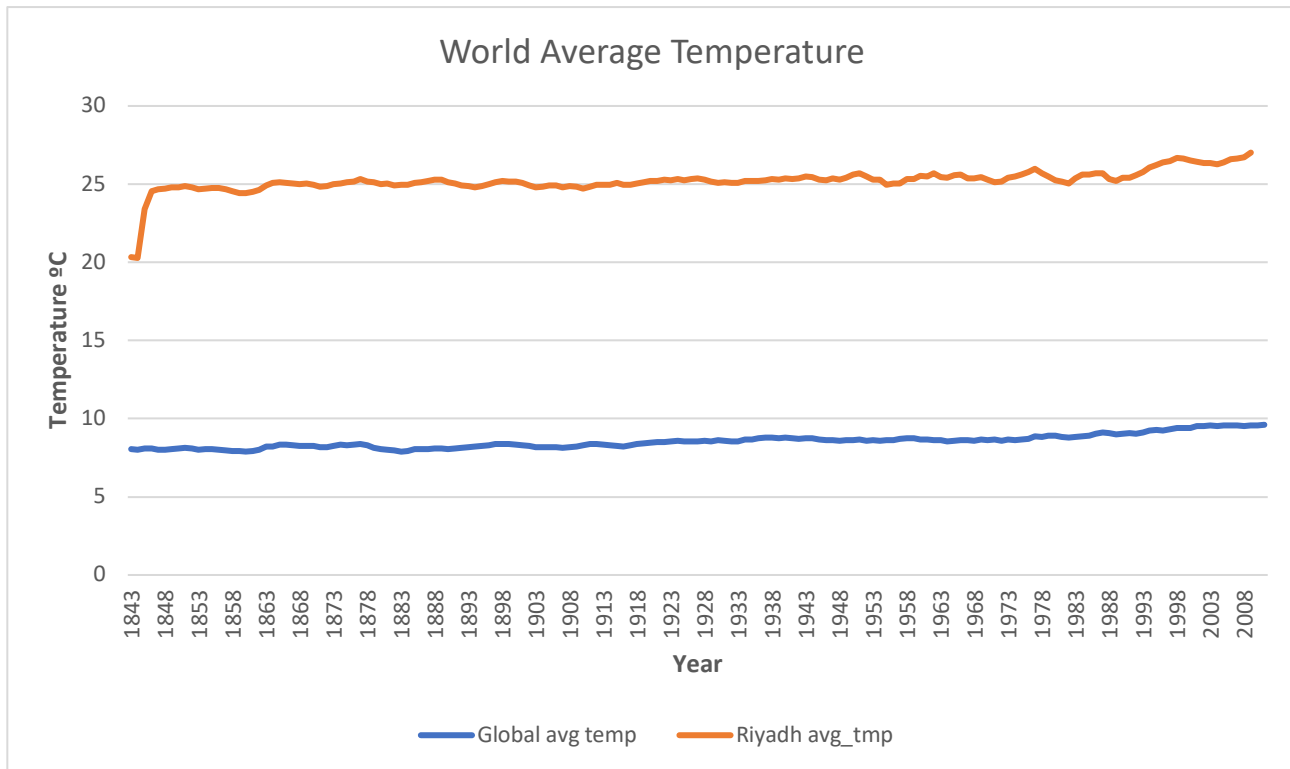
## City averages: (Riyadh, Saudi Arabia)



Using the Average function to calculate the moving average:

1861	Riyadh	Saudi Arabia	24.13	24.658
1862	Riyadh	Saudi Arabia	23.77	24.56
1863	Riyadh	Saudi Arabia	24.28	24.414
1864	Riyadh	Saudi Arabia	25.03	24.43
1865	Riyadh	Saudi Arabia	25.23	24.488
1866	Riyadh	Saudi Arabia	24.92	24.646
1867	Riyadh	Saudi Arabia	25.22	24.936
1868	Riyadh	Saudi Arabia	25	=AVERAGE(D23:D27)
1869	Riyadh	Saudi Arabia	25.3	25.134
1870	Riyadh	Saudi Arabia	25.02	25.092

## Comparing the world averages with my city averages:



### Observations:

- The yearly average for my city is **25.214**, using this SQL statement:  
[ SELECT AVG(avg\_temp) FROM city\_data  
WHERE country = 'Saudi Arabia'  
AND city = 'Riyadh' ]  
,and the yearly average for the global is **8.369**, using this SQL statement:  
[ SELECT AVG(avg\_temp)  
FROM global\_data ]  
, the difference between them is **25.214 - 8.369 = 16.845**
- Years between 1843 and 1848 have average less than the rest of the years by 10 °C.
- My city has a range between 25 and 28 for most of the years between 1848 and 2013.
- From the charts we can see that my city and the global get hotter every year, this has been trend for the 150 years that shown in the chart.